

NEW JERSEY DEPARTMENT OF TRANSPORTATION

MEMORANDUM

TO: All Personnel Concerned

FROM: Robert K. Suess, Chief *Robert K. Suess*
Bureau of Roadway Plans and Specifications

DATE: February 7, 1994

PHONE: 530-2574

SUBJECT: Construction Contingencies
94003 APC

Reference: Memorandum to All Design Units entitled "Construction Contingencies",
94002 ADU, dated February 4, 1994

The following information and attachments shall be used as a guide by all personnel involved in the preparation of Engineer's Estimate Summary Sheets and Department Action Slips (AD-12) for Federal projects.

This Memorandum provides the format and sample calculations for including Construction Contingency amounts in Federal projects or the Federal portion of 100% State Projects. Contingency amounts shall be determined as directed in the referenced All Design Units Memorandum.

Construction Contingencies shall be calculated prior to bids based on the estimated contract amount. This amount shall be shown on the AD-12 request to advertise. Subsequent to bids, Construction Contingencies shall be recalculated based on the apparent low bid.

The revised Construction Contingency amount shall be included in the Bid Analysis Memorandum (See attachment No. 5). A copy of the original memo shall immediately be sent to Mr. J. Isler of the Bureau of Construction Services. The Bureau of Construction Services will then include the revised Construction Contingency amount on the AD-12 when processing the request for award of project. The original Bid Analysis shall be retained by the preparer until the Award Package has been received.

The Engineer's Estimate Summary Sheet and Department Action Slip shall be as shown on attachments 1 through 4.

Attachment No. 1 provides the format to be used for Federally Participating Projects.

Attachment No. 2 provides the format to be used for projects with multiple funding sources. (This example contains State and Federal funding).

Attachment No. 3 provides the format to be used when it is known that a Change of Plan will be imminent. The cost of the anticipated Change of Plan plus the Contingency amount determined from the scale shall be shown as the total Construction Contingency Cost.

Attachment No. 4 provides the format to be used for a project with more than one Federal project number.

It should be noted that the italicized print on attachments 1 through 4 represent revisions to the Engineer's Estimate Summary Sheet as a result of the addition of Construction Contingencies.

Department Action Slips (AD-12) and sample calculations for each AD-12 have also been included. Calculations provided with the AD-12's are for informational purposes only and are not to be shown on the AD-12.

cc: K. Afferton, C. Takacs, R. Pege, H. Capers, M. Lemmo, M. Kjetsaa,
I. E. Senyk, F. Battaglia, A. Kuchtyak, C. Rebbeck, M. Cronin,
F. Cocchiola, C. Combs, R. Hansbury, B. Cook, S. Alu, R. Delaney,
W. Dixon, F. Pinto, J. Fasanella, A. Fischer, Y. Kim, G. Cliver,
B. Shah, K. Shelat, A. Krawtschenko, J. Mycock, M. Patel, G. Nicholl,
D. Piscopo, S. Patel, M. Ritualo, J. Wincek, K. Zummo, M. DiBenedetti,
J. Yeager, J. Willey, R. Farese, C. Miller

RKS:SA:ab

94003 APC

ROUTE 80 SECTION 3A
FEDERAL PROJECT NUMBER STP-000S(001)
SUMMARY

| | | | |
|-----|---|---|----------------|
| A. | RAW COST PARTICIPATING ITEMS (ROADWAY & BRIDGE ITEMS) FEDERAL PROJECT NUMBER STP-000S(001) | = | \$1,500,000.00 |
| B. | CONTRACT CONSTRUCTION ENGINEERING ITEMS FEDERAL PROJECT NUMBER STP-000S(001) | = | 20,000.00 |
| C. | TOTAL NON-PARTICIPATING ITEMS FEDERAL PROJECT NUMBER STP-000S(001) | = | 3,000.00 |
| D. | TOTAL CONTRACT ITEMS (A+B+C) FEDERAL PROJECT NUMBER STP-000S(001) | = | 1,523,000.00 |
| E. | TOTAL NON-CONTRACT CONSTRUCTION ENGINEERING (10% OF A) FEDERAL PROJECT NUMBER STP-000S(001) | = | 150,000.00 |
| E1. | PARTICIPATING CONSTRUCTION CONTINGENCIES (FROM CONTINGENCY CHART) | = | 65,000.00 |
| F. | ESTIMATED FEDERALLY PARTICIPATING COST (A+B+E+E1) FEDERAL PROJECT NUMBER STP-000S(001) | = | 1,735,000.00 |
| G. | ESTIMATED PROJECT COST (C+F) FEDERAL PROJECT NUMBER STP-000S(001) | = | \$1,738,000.00 |

Project-Subject

Route 80, Section 3A
ADVERTISEMENT
December 3, 1993JOB NO. DESIGN 8711-142
JOB NO. CONSTRUCTION
D.P. #

Approval is hereby requested of the Plans and Specifications and also the authority to advertise subject Project after concurrence of the Federal Highway Administration.

Approval of Commission Action will establish construction contingencies in the amount of Federal Participating = \$65,000.

ESTIMATED CONTRACT AMOUNT = \$1,523,000.
ESTIMATED CONTINGENCY AMOUNT = + 65,000.
TOTAL AMOUNT \$1,588,000.

☐ Check If Consultant Agreement

| ROUTE | SECTIONS | DESCRIPTION | | | |
|--------------------------------------|----------|--|-------------------------------------|------------------------------------|-------------------------|
| 8 | 3A | Eastbound Lanes from Route 23 Overpass to East of Route 20 Interchange, Milling and Resurfacing, Borough of West Paterson, City of Paterson. | | | |
| Year & Item No. Construction Program | | Appropriation Account No. (s) | | Job No. (s) | Budget Code (s) |
| 1994/130 | | 480-083-6200-199-TCAP-7211 | | 1602-506 | |
| Federal/State Project No. | | Federal System (s) Type | Federal Fund Sharing | State Fund Sharing | |
| 9413-700 | | | 1,268,000 80 % | Cash \$ 317,000 20 % In-kind \$ | |
| Outside/Other Party Sharing | | Non-Participating-State Share | Total Amount | | Accounting Use-Req. No. |
| Cash \$ % In-kind \$ % | | \$ 3,000 % | Cash \$ 1,588,000 % In-kind \$ % | | |

EXECUTIVE APPROVALS

APPROVED BY: _____

Date

Date

Date

Date

Date

Certification of Funds

Date

APPROVED

FOR

COMMISSIONER OF TRANSPORTATION

Schedule _____ 19

Action Certified

Secretary

AD-12 CALCULATIONS

(D+E1) = Total Amount rounded up to nearest \$1,000

\$1,523,000 + \$65,000 = \$1,588,000

Total Amount -C = Total Fed. Participating

\$1,588,000 - (\$3,000) = \$1,585,000

Total Fed. Participating X % Fed. Share = Fed. Fund Sharing

\$1,585,000 X .80 = \$1,268,000

Total Fed. Participating - Fed. Fund Sharing = STATE Fund Sharing

\$1,585,000 - \$1,268,000 = \$317,000

ATTACHMENT 1B

ROUTE 80 SECTION 3A
FEDERAL PROJECT NUMBER STP-000S(001)
SUMMARY

| | | | |
|-----|---|---|----------------|
| A. | RAW COST PARTICIPATING ITEMS (ROADWAY & BRIDGE ITEMS) FEDERAL PROJECT NUMBER STP-000S(001) | = | \$5,000,000.00 |
| B. | CONTRACT CONSTRUCTION ENGINEERING ITEMS FEDERAL PROJECT NUMBER STP-000S(001) | = | 40,000.00 |
| C. | TOTAL NON-PARTICIPATING ITEMS FEDERAL PROJECT NUMBER STP-000S(001) | = | 2,000,000.00 |
| D. | TOTAL CONTRACT ITEMS (A+B+C) FEDERAL PROJECT NUMBER STP-000S(001) | = | 7,040,000.00 |
| E. | TOTAL NON-CONTRACT CONSTRUCTION ENGINEERING (10% OF A) FEDERAL PROJECT NUMBER STP-000S(001) | = | 500,000.00 |
| E1. | PARTICIPATING CONSTRUCTION CONTINGENCIES | = | 205,000.00 |
| F. | ESTIMATED FEDERALLY PARTICIPATING COST (A+B+E+E1) FEDERAL PROJECT NUMBER STP-000S(001) | = | 5,745,000.00 |
| G. | ESTIMATED PROJECT COST (C+F) FEDERAL PROJECT NUMBER STP-000S(001) | = | \$7,745,000.00 |

NEW JERSEY DEPARTMENT OF TRANSPORTATION
DEPARTMENT ACTION SLIP

ATTACHMENT NO. 2A

Project-Subject

Route 80, Section 3A
ADVERTISEMENT
December 3, 1993JOB NO. DESIGN 1117-400
JOB NO. CONSTRUCTION
D.P. #

Date

Approval is hereby requested of the Plans and Specifications and also the authority to advertise subject Project after concurrence of the Federal Highway Administration.

Approval of Commission Action will establish construction contingencies in the amount of
Federal Participating = \$205,000.00

ESTIMATED CONTRACT AMOUNT = \$7,040,000.00
ESTIMATED CONTINGENCY AMOUNT = + 205,000.00
TOTAL AMOUNT \$7,245,000.00

☐ Check If Consultant Agreement

| ROUTE | SECTIONS | DESCRIPTION | | | |
|--------------------------------------|----------|--|----------------------|-------------------------|-----------------|
| 80 | 3A | Eastbound Lanes from Route 23 Overpass to East of Route 20 Interchange. Milling and Resurfacing, Borough of West Paterson, City of Paterson. | | | |
| Year & Item No. Construction Program | | Appropriation Account No. (s) | | Job No. (s) | Budget Code (s) |
| 1994/130 | | 480-083-6200-I99-TCAP-7000 | | 1600-000 | |
| Federal/State Project No. | | Federal System (s) Type | Federal Fund Sharing | State Fund Sharing | |
| 9413-700 | | | 4,196,000. 80 | Cash \$ 1,049,000. 20 | |
| | | | \$ _____ % | In-kind \$ _____ % | |
| Outside/Other Party Sharing | | Non-Participating-State Share | | Total Amount | |
| Cash \$ _____ % | | 2,000,000. | | 7,245,000. | |
| In-kind \$ _____ % | | \$ _____ % | | Cash \$ _____ % | |
| | | | | In-kind \$ _____ % | |
| | | | | Accounting Use-Req. No. | |

EXECUTIVE APPROVALS

Date

Date

Date

Date

APPROVED BY: _____

Date

Certification of Funds

Date

APPROVED

FOR

COMMISSIONER OF TRANSPORTATION

Schedule _____ 19

Action Certified

Secretary

AD-12 CALCULATIONS

(D+E1) = Total Amount rounded up to nearest \$1,000

$\$7,040,000 + \$205,000 = \$7,245,000$

Total Amount - (C) = Total Fed. Participating

$\$7,245,000 - (\$2,000,000) = \$5,245,000$

Total Fed. Participating X % Fed. Sharing = Fed. Fund Sharing

$\$5,245,000 \times .80 = \$4,196,000$

Total Fed. Participating - Fed. Fund Sharing = State Fund Sharing

$\$5,245,000 - \$4,196,000 = \$1,049,000$

ROUTE 80 SECTION 3A
FEDERAL PROJECT NUMBER STP-000S(001)
SUMMARY

| | | | |
|-----|---|---|----------------|
| A. | RAW COST PARTICIPATING ITEMS (ROADWAY & BRIDGE ITEMS) FEDERAL PROJECT NUMBER STP-000S(001) | = | \$1,500,000.00 |
| B. | CONTRACT CONSTRUCTION ENGINEERING ITEMS FEDERAL PROJECT NUMBER STP-000S(001) | = | 20,000.00 |
| C. | TOTAL NON-PARTICIPATING ITEMS FEDERAL PROJECT NUMBER STP-000S(001) | = | 3,000.00 |
| D. | TOTAL CONTRACT ITEMS (A+B+C) FEDERAL PROJECT NUMBER STP-000S(001) | = | 1,523,000.00 |
| E. | TOTAL NON-CONTRACT CONSTRUCTION ENGINEERING (10% OF A) FEDERAL PROJECT NUMBER STP-000S(001) | = | 150,000.00 |
| E1. | PARTICIPATING CONSTRUCTION CONTINGENCIES (FROM CONTINGENCY CHART) | = | 65,000.00 |
| E2. | PARTICIPATING PROPOSED CHANGE OF PLAN FEDERAL PROJECT NUMBER STP-000S(001) | = | 50,000.00 |
| F. | ESTIMATED FEDERALLY PARTICIPATING COST (A+B+E+E1+E2) FEDERAL PROJECT NUMBER STP-000S(001) | = | 1,785,000.00 |
| G. | ESTIMATED PROJECT COST (C+F) FEDERAL PROJECT NUMBER STP-000S(001) | = | \$1,788,000.00 |

NEW JERSEY DEPARTMENT OF TRANSPORTATION
DEPARTMENT ACTION SLIP

ATTACHMENT NO. 3A

Project-Subject

Route 80, Section 3A
ADVERTISEMENT
December 3, 1993

JOB NO. DESIGN 1118-400
JOB NO. CONSTRUCTION
D.P. #

Approval is hereby requested of the Plans and Specifications and also the authority to advertise subject Project after concurrence of the Federal Highway Administration.

Approval of Commission Action will establish construction contingencies in the amount of
Federal Participating = \$65,000

Proposed Change of Plan for Removal of Asbestos in Demolition of Buildings,
Federal Participating Amount = \$50,000.

Total Contingency Amount \$115,000.

ESTIMATED CONTRACT AMOUNT = \$1,523,000.00
ESTIMATED CONTINGENCY AMOUNT = + 115,000.00
TOTAL AMOUNT \$1,638,000.00

☐ Check If Consultant Agreement

| ROUTE | SECTIONS | DESCRIPTION | | | |
|--------------------------------------|----------|---|--|-------------------------------------|-----------------|
| 80 | 3A | Westbound Lanes from Route 23 Overpass to Route 20 Interchange, Widening Resurfacing, Borough of West Paterson, City of Paterson. | | | |
| Year & Item No. Construction Program | | Appropriation Account No. (s) | | Job No. (s) | Budget Code (s) |
| 1994/130 | | 480-083-6200-199-TCAP-7200 | | 1600-000 | |
| Federal/State Project No. | | Federal System (s) Type | Federal Fund Sharing | State Fund Sharing | |
| 9413-700 | | | 1,308,000.00 80 % | Cash \$ 327,000.00 20 In-kind \$ | |
| Outside/Other Party Sharing | | Non-Participating-State Share | Total Amount | Accounting Use-Req. No. | |
| Cash \$ % In-kind \$ % | | \$ 3,000.00 % | Cash \$ 1,638,000.00 % In-kind \$ % | | |

EXECUTIVE APPROVALS

Date _____

Date _____

Date _____

Date _____

APPROVED BY: _____
Date _____

Certification of Funds Date

APPROVED

FOR

COMMISSIONER OF TRANSPORTATION

Schedule _____ 19

Action Certified

Secretary

AD-12 CALCULATIONS

$(D+E1+E2) = \text{TOTAL AMOUNT ROUNDED UP TO NEAREST \$1,000}$

$\$1,523,000 + \$65,000 + \$50,000 = \$1,638,000.00$

Total Amount - (C) = Total Fed. Participating

$\$1,638,000.00 - (\$3,000) = \$1,635,000.00$

Total Fed. Participating X % Fed. Sharing = Fed. Fund Sharing

$\$1,635,000.00 (.80) = \$1,308,000.00$

Total Fed. Participating - Fed. Fund Sharing = State Fund Sharing

$\$1,635,000.00 - \$1,308,000.00 = \$327,000.00$

ROUTE 208 SECTION 3S
FEDERAL PROJECT NUMBER BHF-NH-56(130)
SUMMARY

| | | | |
|------|--|---|----------------|
| A. | RAW COST PARTICIPATING ITEMS (ROADWAY & BRIDGE ITEMS) FEDERAL PROJECT NUMBER BHF-56-(130) | = | \$1,136,897.00 |
| B. | CONTRACT CONSTRUCTION ENGINEERING ITEMS FEDERAL PROJECT NUMBER BHF-56-(130) | = | 18,475.00 |
| C. | TOTAL NON-PARTICIPATING ITEMS FEDERAL PROJECT NUMBER BHF-56-(130) | = | 0.00 |
| D. | TOTAL CONTRACT ITEMS (A+B+C) FEDERAL PROJECT NUMBER BHF-56-(130) | = | 1,155,372.00 |
| E. * | TOTAL NON-CONTRACT CONSTRUCTION ENGINEERING (10% OF A) FEDERAL PROJECT NUMBER BHF-56-(130) | = | 113,628.00 |
| E1. | PARTICIPATING CONSTRUCTION CONTINGENCIES (FROM CONTINGENCY CHART) | = | 50,500.00 |
| F. | ESTIMATED FEDERALLY PARTICIPATING COST (A+B+E+E1) FEDERAL PROJECT NUMBER BHF-56-(130) | = | 1,319,500.00 |
| G. | ESTIMATED PROJECT COST BHF-56-(130) FUNDING (C+F) | = | \$1,319,500.00 |

* Amount is to be modified so that F. amount
is rounded to lowest \$100.

ROUTE 208 SECTION 3S
FEDERAL PROJECT NUMBER BHF-NH-56(130)
SUMMARY

| | | | |
|------|--|---|----------------|
| A. | RAW COST PARTICIPATING ITEMS (ROADWAY & BRIDGE ITEMS) FEDERAL PROJECT NUMBER NH-56(130) | = | \$5,717,166.55 |
| B. | CONTRACT CONSTRUCTION ENGINEERING ITEMS FEDERAL PROJECT NUMBER NH-56(130) | = | 72,425.00 |
| C. | TOTAL NON-PARTICIPATING ITEMS FEDERAL PROJECT NUMBER NH-56(130) | = | 1,500.00 |
| D. | TOTAL CONTRACT ITEMS (A+B+C) FEDERAL PROJECT NUMBER NH-56(130) | = | 5,791,091.55 |
| E. * | TOTAL NON-CONTRACT CONSTRUCTION ENGINEERING (10% OF A) FEDERAL PROJECT NUMBER NH-56(130) | = | 571,608.45 |
| E1. | PARTICIPATING CONSTRUCTION CONTINGENCIES (FROM CONTINGENCY CHART) | = | 226,500.00 |
| F. | ESTIMATED FEDERALLY PARTICIPATING COST (A+B+E+E1) FEDERAL PROJECT NUMBER NH-56(130) | = | 6,587,700.00 |
| G. | ESTIMATED COST NH-56(130) FUNDING (C+F) FEDERAL PROJECT NUMBER NH-56(130) FUNDING | = | 6,589,200.00 |
| H. | ESTIMATED FEDERALLY PARTICIPATING COST F=(BHF-56-(130) FUNDING + F=(NH-56(130) FUNDING) FEDERAL PROJECT NO. BHF-NH-56(130) | = | 7,907,200.00 |
| I. | ESTIMATED PROJECT COST G=(BHF-56(130) FUNDING + G=(NH-56(130) FUNDING) FEDERAL PROJECT NO. BHF-NH-56(130) | = | \$7,908,700.00 |

* Amount is to be modified so that F. amount is rounded to lowest \$100.

Project-Subject

Route 208, Section 3S
ADVERTISEMENT
December 3, 1993

JOB NO. DESIGN 1114-200
JOB NO. CONSTRUCTION
D.P. #

Date

Approval is hereby requested of the Plans and Specifications and also the authority to advertise subject Project after concurrence of the Federal Highway Administration.

Approval of Commission Action will establish construction contingencies in the amount of Federal Participating = \$50,500 (BHF FUNDING) + \$226,500 (NH FUNDING) = \$277,000.

| Funding | Federal Fund Sharing 80% | State Fund Sharing 20% | Non-Participating | Total |
|---------|--------------------------|------------------------|-------------------|--------------|
| BHF | 964,800.00 | 241,200.00 | 00.00 | 1,306,000.00 |
| NH | 4,813,200.00 | 1,203,300.00 | 1,500.00 | 6,016,500.00 |

ESTIMATED CONTRACT AMOUNT = \$6,947,000.00
ESTIMATED CONTINGENCY AMOUNT = + 277,000.00
TOTAL AMOUNT = \$7,224,000.00

☐ Check If Consultant Agreement

| ROUTE | SECTIONS | DESCRIPTION |
|---------------|----------|---|
| 208 (1953) | 3S | From Vicinity of Route 4 to the Vicinity of Lafayette Road. Resurfacing, Barrier Curb, Signs, Safety Improvements and Bridge Rehabilitation, in the Boroughs of Fairlawn, Glen Rock and Hawthorne, in the Counties of Bergen and Passaic. |

| Year & Item No. Construction Program | Appropriation Account No. (s) | Job No. (s) | Budget Code (s) |
|--------------------------------------|---|-------------|-----------------|
| | 6300-480-362442-73 (NH) 6300-480-422442-73 (BH) 6300-480-607742-73 (DP) | | |

| Federal/State/Local No. | Federal System (s) (DP) | Federal Fund Sharing | State Fund Sharing | EDA |
|-------------------------|-------------------------|----------------------|--------------------|-----|
|-------------------------|-------------------------|----------------------|--------------------|-----|

| | | | |
|----------------|------------------|----------------------|--|
| BHF-NH-56(130) | NATIONAL HIGHWAY | \$ 5,778,000.00 80 % | Cash \$ 1,444,500.00 25 % In-kind \$ 0.00 0 % |
|----------------|------------------|----------------------|--|

| Outside/Other Party Sharing | Non-Participating-State Share | Total Amount | Accounting Use-Req. No. |
|---------------------------------------|-------------------------------|--|-------------------------|
| Cash \$ _____ % In-kind \$ _____ % | \$ 1500.00 _____ % | Cash \$ 7,224,000.00 % In-kind \$ _____ % | |

EXECUTIVE APPROVALS

Date _____

Date _____

Date _____

Date _____

Date _____

APPROVED BY: _____

Certification of Funds _____ Date _____

APPROVED
FOR
COMMISSIONER OF TRANSPORTATION
Schedule _____ 19

Action Certified _____

Secretary _____

AD-12 CALCULATIONSBHF FUNDING

(D+E1) = TOTAL AMOUNT ROUNDED UP TO NEAREST \$1,000

$\$1,155,372 + \$50,500 = \$1,205,872 = \$1,206,000$

Total Amount - (C) = Total Federal Participating

$\$1,206,000 - 0 = \$1,206,000.00$

TOTAL FEDERAL PARTICIPATING X % FEDERAL SHARING = FED. FUND SHARING

$\$1,206,000 \times .80 = \$964,800.00$

TOTAL FEDERAL PARTICIPATING - FED. FUND SHARING = STATE FUND SHARING

$\$1,206,000.00 - \$964,800.00 = \$241,200$

NH FUNDING

(D+E1) = TOTAL AMOUNT ROUNDED UP TO NEAREST \$1,000

$\$5,791,091.55 + \$226,500 = \$6,017,591.55 = \$6,018,000.00$

TOTAL AMOUNT - (C) = TOTAL FEDERAL PARTICIPATING

$\$6,018,000.00 - (\$1500) = \$6,016,500.00$

TOTAL FEDERAL PARTICIPATING X % FED. SHARING = FED. FUND SHARING

$\$6,016,500.00 \times (.80) = \$4,813,200.00$

TOTAL FED. PARTICIPATING - FED. FUND SHARING = STATE FUND SHARING

$\$6,016,500.00 - \$4,813,200.00 = \$1,203,300.00$

ATTACHMENT 48

MEMORANDUM

TO: Charles Takacs
Director of Roadway Design

FROM: Robert K. Suess
Chief, Bureau of Roadway
Plans and Specifications

DATE: February 9, 1994

PHONE: 5-2574

SUBJECT: Route 1, Sections 2X
Bid Analysis
Federal Project No. NH-33(100)

In the opinion of this office, the Low Bid of 4.48% (Estimate = \$1,214,362.75 vs. Low Bid = \$1,160,000.00) under the Engineer's Estimate is acceptable and it is recommended that the attached Department Action Slip be signed and the Contract awarded to the Low Bidder.

Contract Construction Contingencies in the amount of \$25,000.00 are requested.

Attachment

cc: G. Kerwin
R. Stout
J. Wincek
D. Jones
A. Kuchtyak
S. Ali
J. Isler

RKS:SNA:rmf

ATTACHMENT NO. 5